

Presented by:



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Water & Wastewater System Development Charge Update

Final
Report

Prepared for:



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City of Sisters
2023 Water & Wastewater SDC Update

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Introduction/History of the Project

The City of Sisters conducts periodic updates to its Comprehensive Plan and its various Public Facility Plans to provide orderly and sustainable growth of municipal infrastructure. A key component to funding these public facilities is the system development charge (SDC) program. SDCs are one-time charges for new development—designed to recover the costs of infrastructure capacity needed to serve new development. This section describes the policy context and project scope upon which the body of this report is based. It concludes with a numeric overview of the calculations presented in subsequent sections of this report for water and wastewater SDCs.

The city’s current and schedule of water and wastewater SDCs were last reviewed and adopted by the City Council in May, 2018 via Resolution No. 2018-03. In November, 2023, the City hired Donovan Enterprises, Inc. to review and update the SDC. With this review and update, the City has stated a number of objectives:

- Review the basis for charges to ensure consistency with the City’s adopted water and wastewater SDC methodology;
- Address specific policy, administrative, and technical issues which had arisen from application of the existing SDCs;
- Determine the most appropriate and defensible fees, ensuring that development is paying its way;
- Consider possible revisions to the structure or basis of the charges which might improve equity or proportionality to demand;
- Provide clear, orderly documentation of the assumptions and results, so that City staff could, by reference, respond to questions or concerns from the public.

This report provides the documentation of that effort and was done in close coordination with City staff and available facilities planning documents. The SDC updates comply with Sisters Municipal Code Chapter 13.25 (i.e., The SDC enabling ordinance).

Table 1 gives a component breakdown for the current and proposed residential equivalent SDCs for water and wastewater.

Table 1 - Component Breakdown of the Proposed Residential Equivalent Water and Wastewater SDCs

Line Item Description	Service Unit	Proposed	Current	Difference
<i>Water:</i>				
	per 3/4" water meter			
Reimbursement fee		\$1,886	\$1,845	\$41
Improvement fee		4,999	1,918	3,082
Administration fee @ 5%		344	188	156
Total		\$7,229	\$3,951	\$3,278
<i>Wastewater:</i>				
	per 3/4" water meter			
Reimbursement fee		\$3,131	\$2,816	\$316
Improvement fee		2,080	2,104	(24)
Administration fee @ 5%		261	246	15
Total		\$5,472	\$5,166	\$306

Analytical Process for the Updates

The essential ingredient in the development and calculation of an SDCs is valid sources of data. For this project, the consultant team has relied on a number of data sources. The primary sources have been the newly formulated and adopted facilities plans for water and wastewater. On June 14, 2023, the City Council adopted these plans via Ordinances 530 and 531, respectively. We have supplemented these data sources with City utility billing records, certified census data, and other documents that we deemed helpful, accurate, and relevant to this study. Table 2 contains a bibliography of the key documents/sources that we relied upon to facilitate our analysis and hence the resulting SDCs.

Table 2 - Data Sources for the Calculation of SDCs

Service	Master Plan Document and/or Corroborating Source Documentation
Water	<ul style="list-style-type: none"> • City of Sisters Water System Master Plan Update; Anderson Perry & Associates, Inc.; March, 2023 • City of Sisters Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2022 • City of Sisters Water System Fixed Asset Schedule; June 30, 2023; City Records • City of Sisters Water System Construction Work in Progress Balances Work Papers; June 30, 2023; City Records • City of Sisters Utility Billing records for fiscal November, 2023 • Water meters in service per City Staff; effective November, 2023 • City of Sisters Municipal Code Chapter 13.25 (System Development Charges)
Wastewater	<ul style="list-style-type: none"> • City of Sisters Wastewater Facilities Plan Update; Anderson Perry & Associates, Inc.; March, 2023 • City of Sisters Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2022 • 2021 and 2022 Discharge Monitoring Reports; City of Sisters • Sisters wastewater system fixed asset schedule; June 30, 2023; City records • City of Sisters Utility Billing System – wastewater system active accounts and water meters in service report; November, 2023 • Portland State University, College of Urban Affairs, Population Research Center; Certified census for Sisters, Oregon; June 30, 2022 • City of Sisters Municipal Code Chapter 13.25 (System Development Charges)

The data sources shown in Table 2 were used to formulate the two (2) components of the water and wastewater SDCs. These components are the reimbursement and improvement fees. The City has been constructing the SDCs with these two components for over twenty years, and our analysis does not propose changing that methodology. A brief definition of the two components are:

- *The reimbursement fee* considers the cost of existing facilities, prior contributions by existing users of those facilities, the value of the unused/available capacity, and generally accepted ratemaking principles. The objective is future system users contribute no more than an equitable share to the cost of existing facilities. The reimbursement fee can be spent on capital costs or debt service related to the systems for which the SDC is applied.
- *The improvement fee* portion of the SDC is based on the cost of planned future facilities that expand the system's capacity to accommodate growth or increase its level of performance. In developing an analysis of the improvement portion of the fee, each project in the respective service's capital improvement plan is evaluated to exclude costs related to correcting existing system deficiencies or upgrading for historical lack of capacity. An example is a facility which improves system capacity to better serve current customers. The costs for this type of project must be eliminated from the improvement fee calculation. Only capacity increasing/level of performance costs provide the basis for the SDC calculation. The improvement SDC is calculated as a function of the estimated number of additional equivalent residential units to be served by the City's facilities over the planning period. Such a fee represents the greatest potential for future SDC changes. The improvement fee must also provide a credit for construction of a qualified public improvement.

SDC Legal Authorization and Background

SDCs are authorized by Oregon Revised Statute (ORS) 223.297-314. The statute is specific in its definition of system development charges, their application, and their accounting. In general, an SDC is a one-time fee imposed on new development or expansion of existing development and assessed at the time of development approval or increased usage of the system. Overall, the statute is intended to promote equity between new and existing customers by recovering a proportionate share of the cost of existing and planned/future capital facilities that serve the developing property. Statute further provides the framework for the development and imposition of SDCs and establishes that SDC receipts may only be used for capital improvements and/or related debt service.

Finally, two cost basis adjustments are potentially applicable to both reimbursement and improvement fees: fund balance and compliance costs. In this study, the project team paid attention to this detail to align future infrastructure costs to those responsible for paying those costs. The reasons for this attention is as follows:

- *Fund Balances* - To the extent that SDC revenue is currently available in fund balance, that revenue should be deducted from its corresponding cost basis. For example, if the city has wastewater improvement fees that it has collected but not spent, then those unspent improvement fees should be deducted from the wastewater system's improvement fee cost basis to prevent charging twice for the same capacity.
- *Compliance Costs* - ORS 223.307(5) authorizes the expenditure of SDCs on "the costs of complying with the provisions of ORS 223.297 to 223.314, including the costs of developing system development charge methodologies and providing an annual accounting of system development

charge expenditures.” To avoid spending monies for compliance that might otherwise have been spent on growth-related projects, this report includes an estimate of compliance costs in its SDCs.

Reimbursement Fee

The reimbursement fee represents a buy-in to the cost, or value, of infrastructure capacity within the existing system. Generally, if a system were adequately sized for future growth, the reimbursement fee might be the only charge imposed, since the new customer would be buying existing capacity. However, staged system expansion is needed, and an improvement fee is imposed to allocate those growth related costs. Even in those cases, the new customer also relies on capacity within the existing system, and a reimbursement component is warranted.

In order to determine an equitable reimbursement fee to be used in conjunction with an improvement fee, two points should be highlighted. First, the cost of the system to the City’s customers may be far less than the total plant-in-service value. This is due to the fact that elements of the existing system may have been contributed, whether from developers, governmental grants, and other sources. Therefore, the net investment by the customer/owners is less. Second, the value of the existing system to a new customer is less than the value to an existing customer, since the new customer must also pay, through an improvement fee, for expansion of some portions of the system.

The method used for determining the reimbursement fee accounts for both of these points. First, the charge is based on the net investment in the system, rather than the gross cost. Therefore, donated facilities, typically including local facilities, and grant-funded facilities, would be excluded from the cost basis. Also, the charge should be based on investments clearly made by the current users of the system, and not already supported by new customers. Tax supported activities fail this test since funding sources have historically been from general revenues, or from revenues which emanate, at least in part, from the properties now developing. Second, the cost basis is allocated between used and unused capacity, and, capacity available to serve growth. In the absence of a detailed asset by asset analysis, it is appropriate to allocate the cost of existing facilities between used and available capacity proportionally based on the forecasted population growth as converted to equivalent dwelling units over the planning period. This approach reflects the philosophy, consistent with the City’s Updated Master Plans, that facilities have been sized to meet the demands of the customer base within the established planning period.

Improvement Fee

There are three basic approaches used to develop improvement fee SDCs: “standards driven,” “improvements-driven,” and “combination/hybrid” approaches. The “standards-driven” approach is based on the application of Level of Service (LOS) standards for facilities. Facility needs are determined by applying the LOS standards to projected future demand, as applicable. SDC-eligible amounts are calculated based on the costs of facilities needed to serve growth. This approach works best where level of service standards have been adopted but no specific list of projects is available. The “improvements-driven” approach is based on a specific list of planned capacity increasing capital improvements. The portion of each project that is attributable to growth is determined, and the SDC-eligible costs are calculated by dividing the total costs of growth-required projects by the projected increase in projected future demand, as applicable. This approach works best where a detailed master plan or project list is available and the benefits of projects can be readily apportioned between growth and current users. Finally, the combination/hybrid-approach includes elements of both the “improvements driven” and “standards-driven” approaches. Level of Service standards may be used to create a list of planned capacity-increasing projects, and the growth required portions of projects are then used as the basis for

determining SDC eligible costs. This approach works best where levels of service have been identified and the benefits of individual projects are not easily apportioned between growth and current users.

In the past, the City has utilized the “improvements-driven” approach for the calculation of water and wastewater SDCs. The City has used the LOS standards approach for parks. This study continues to use this method and has relied on the capital improvement plans that are incorporated in the master plans, and plan updates for the water and wastewater systems.

For this SDC update, the improvement fee represents a proportionate share of the cost to expand the systems to accommodate growth. This charge is based on the newly adopted capital improvement plans established by the City for the water and wastewater municipal services. The costs that can be applied to the improvement fees are those that can reasonably be allocable to growth. Statute requires that the capital improvements used as a basis for the charge be part of an adopted capital improvement schedule, whether as part of a system plan or independently developed, and that the improvements included for SDC eligibility be capacity or level of service expanding. The improvement fee is intended to protect existing customers from the cost burden and impact of expanding a system that is already adequate for their own needs in the absence of growth.

The key step in determining the improvement fee is identifying capital improvement projects that expand the system and the share of those projects attributable to growth. Some projects may be entirely attributable to growth, such as a wastewater collection line that exclusively serves a newly developing area. Other projects, however, are of mixed purpose, in that they may expand capacity, but they also improve service or correct a deficiency for existing customers. An example might be a water distribution reservoir that both expands water storage capacity and corrects a chronic capacity issue for existing users. In this case, a rational allocation basis must be defined.

The improvement portion of the SDC is based on the proportional approach toward capacity and cost allocation in that only those facilities (or portions of facilities) that either expand the respective system’s capacity to accommodate growth or increase its respective level of performance have been included in the cost basis of the fee. As part of this SDC update, City Staff and their engineering consultants were asked to review the planned capital improvement lists in order to assess SDC eligibility. The criteria in Figure 1 were developed to guide the City’s evaluation:

Figure 1 - SDC Eligibility Criteria

<p style="text-align: center;">City of Sisters Steps Toward Evaluating <u>Capital Improvement Lists for SDC Eligibility</u></p> <p><u>ORS 223</u></p> <ol style="list-style-type: none">1. Capital improvements mean the facilities or assets used for :<ol style="list-style-type: none">a. Water supply, transmission, storage, and distributionb. Wastewater collection, transmission, treatment, and disposal<p>This definition DOES NOT ALLOW costs for operation or routine maintenance of the improvements;</p>2. The SDC improvement base shall consider the cost of projected capital improvements needed to increase the capacity of the systems to which the fee is related;3. An increase in system capacity is established if a capital improvement increases the “level of performance or service” provided by existing facilities or provides new facilities.
<p style="text-align: center;"><u>Under the City’ approach, the following rules will be followed</u></p> <ol style="list-style-type: none">1. Repair costs are not to be included;2. Replacement costs will not be included unless the replacement includes an upsizing of system capacity and/or the level of performance of the facility is increased;3. New regulatory compliance facility requirements fall under the level of performance definition and should be proportionately included;4. Costs will not be included which bring deficient systems up to established design levels.

In developing the improvement fee, the project team in consultation with City staff evaluated each of its CIP projects to exclude costs related to correcting existing system deficiencies or upgrading for historical lack of capacity. Only capacity increasing/level of performance costs were used as the basis for the SDC calculation, as reflected in the capital improvement schedules developed by the City. The improvement fee is calculated as a function of the estimated number of projected additional Equivalent $\frac{3}{4}$ " water meter equivalent units for water and wastewater over the planning horizon. Once the future costs to serve growth have been segregated (i.e., the numerator), they can be divided into the total number of new $\frac{3}{4}$ " water meter equivalents that will use the capacity derived from those investments (i.e., the denominator).

Process for the Granting of Credits, Discounts, and Exemptions

SDC Credits Policy

ORS 223.304 requires that credit be allowed for the construction of a "qualified public improvement" which is required as a condition of development approval, is identified in the Capital Improvement Plan,

and either is not located on or contiguous to property that is the subject of development approval or is located on or contiguous to such property and is required to be built larger or with greater capacity than is necessary for the particular development project. The credit for a qualified public improvement may only be applied against an SDC for the same type of improvement and may be granted only for the cost of that portion of an improvement which exceeds the minimum standard facility size or capacity needed to serve the particular project. For multi-phase projects, any excess credit may be applied against SDCs that accrue in subsequent phases of the original development project. In addition to these required credits, the City may, if it so chooses, provide a greater credit, establish a system providing for the transferability of credits, provide a credit for a capital improvement not identified in the Capital Improvement Plan, or provide a share of the cost of an improvement by other means.

The City has adopted a policy for granting SDC credits and has codified this policy in the Sisters Municipal Code Chapter 13.25.120 (SMC 13.25.120). The adopted SDC credit policy consists of five (5) items as follows:

SMC 13.25.120

1. A permittee is eligible for credit against the system development charge constructing a qualified public improvement. This credit shall be only for the improvement fee charged for the type of improvement being constructed. Credit under this section may be granted only for the cost of that portion of the improvement that exceeds the facility size or capacity needed to serve the development project.
2. Applying the adopted methodology, the city may grant a credit against the improvement charge for capital facilities provided as part of the development that reduces the development's demand upon existing capital improvements or the need for further capital improvements or that would otherwise have to be constructed at city expense under the then-existing council policies.
3. When the construction of a qualified public improvement gives rise to a credit amount greater than the improvement fee that would otherwise be levied against the project receiving development approval, the excess credit may be applied against improvement fees that accrue in subsequent phases of the original development project.
4. All credit requests must be in writing and filed with the city before the issuance of a building permit. Improvement acceptance shall be in accordance with the usual and customary practices, procedures, and standards of the city of Sisters. The amount of any credit shall be determined by the city and based upon the subject improvement construction contract documents, or other appropriate information, provided by the applicant for the credit. Upon a finding by the city that the contract amounts exceed prevailing market rate for a similar project, the credit shall be based upon market rates. The city shall provide the applicant with a credit on a form provided by the city. The credit shall state the actual dollar amount that may be applied against any system development charge imposed against the subject property. The applicant has the burden of demonstrating qualification for a credit.
5. Credits shall be apportioned against the property which was subject to the requirements to construct an improvement eligible for credit. Unless otherwise requested, apportionment against lots or parcels constituting the property shall be proportionate to the anticipated public facility service requirements generated by the respective lots or parcels. Upon written application to the city, however, credits shall be reapportioned from any lot or parcel to any other lot or parcel

within the confines of the property originally eligible for the credit. Reapportionment shall be noted on the original credit form retained by the city.

6. Any credits are assignable; however, they shall apply only to that property subject to the original condition for land use approval upon which the credit is based or any partitioned or subdivided parcel or lots of such property to which the credit has been apportioned. Credits shall only apply against system development charges, are limited to the amount of the fee attributable to the development of the specific lot or parcel for which the credit is sought and shall not be a basis for any refund.
7. Any credit request must be submitted before the issuance of a building permit. The applicant is responsible for presentation of any credit and no credit shall be considered after issuance of a building permit.
8. Credits shall be used by the applicant within 10 years of their issuance by the city.

SDC Discount Policy

The City, at its sole discretion, may discount the SDC rates by choosing not to charge a reimbursement fee for excess capacity, or by reducing the portion of growth-required improvements to be funded with SDCs. A discount in the SDC rates may also be applied on a pro-rata basis to any identified deficiencies, which must be funded from sources other than improvement fee SDCs. The portion of growth-required costs to be funded with SDCs must be identified in the CIP. Because discounts reduce SDC revenues, they increase the amounts that must come from other sources, such as user fees or general fund contributions, in order to acquire the facilities identified in the Updated Master Plan(s).

Partial and Full SDC Exemption

The City may exempt certain types of development from the requirement to pay SDCs. Exemptions reduce SDC revenues and, therefore, increase the amounts that must come from other sources, such as user fees and property taxes. As in the case of SDC credits, the City has articulated a policy relative to partial and full SDC exemption. This SDC exemption policy is codified SMC 13.25.110, and is as follows:

1. Structures and uses established and existing on or before the effective date of the resolution.
2. Additions to single-family dwellings that do not constitute the addition of a dwelling unit, as defined by the city's building code, are exempt from all portions of the system development charge.
3. An alteration, addition, replacement or change in use that does not increase the parcel's or structure's use of a capital improvement is exempt from all portions of the system development charge.

Water SDCs

Water Capital Improvement Plan

The principal source document for the water capital improvement plan (CIP) is the 2023 Water System Master Plan. For this water SDC update, the 2023 water CIP was reviewed for accuracy with City Staff and where appropriate amended. This amendment process consisted of two steps. The first step was to eliminate master plan projects that City Staff deemed unnecessary at the current time due to the very long lead times anticipated for their development. The second step in the CIP amendment process was to review the SDC-eligibility of each project in the CIP as incorporated in the 2023 Water Master Plan (i.e., Table 7-3 SDC-Eligible Projects and Associated Costs). Each project and the Master Plan-recommended SDC eligibility was reviewed with City Staff for accuracy. Upon completion of this review, the following project’s SDC eligibility was amended as follows:

- **Water Storage Priority Project No. 3 – Construct new 2.2 mg water storage tank & rehabilitate the existing 1.6 mg tank (\$3,635,000).** In the 2023 water master plan this project was deemed 100% SDC eligible. Upon review, it was determined not all of the project cost could be allocated to SDC-eligibility; principally due to the rehabilitation cost component of the existing 1.6 mg distribution reservoir. This enhanced review resulted in a revised SDC eligibility percentage of 94.7% based on the following calculations:

	Calculated	Rounded	Percent
<i>SDC-Eligible Costs:</i>			
Estimated construction cost	\$ 4,746,000	\$ 4,746,000	
less: 1.6 mg reservoir rehabilitation cost	(250,000)	(250,000)	
Revised estimated construction cost	4,496,000	4,496,000	
add: 15% contingency	674,400	674,000	
	5,170,400	5,170,000	
add: 15% engineering	775,560	776,000	
	5,945,960	5,946,000	
add: permitting	6,000	6,000	
Total SDC-eligible costs	5,951,960	5,952,000	94.7%
<i>SDC-Ineligible Costs:</i>			
Original project cost w/reservoir rehabilitation	6,283,000	6,283,000	
less: calculated SDC-eligible project costs	5,951,960	5,952,000	
SDC-ineligible costs	331,040	331,000	5.3%
<i>Total Master Plan project cost</i>	\$ 6,283,000	\$ 6,283,000	100.0%

- **Water Distribution Priority Project No. 5 – Install new 16” Ductile Iron transmission line from existing reservoir o Whychus Creek junction (\$1,466,000).** In the 2023 water master plan this project was deemed to be zero percent SDC eligible because the purpose of the project is to replace an existing 12” ductile iron line that is under capacity. Upon further review, the engineering team concluded the following: Assuming the head conditions and length of pipe remain the same, and pipe roughness values are the same, a 16” pipe has 2.13 times the capacity of a 12” pipe. Using these criteria for the evaluation, 47% of the cost would go toward replacing the existing capacity, and 53% would go toward increasing capacity.

The resulting CIP that was used for this SDC update is shown in summary form in Table 3.

Table 3 – Adopted 2023 Water System Capital Improvement Plan

Project Priority	Project Description	Total Project Cost	Projected Funding Sources					Total
			Water Rates	Water SDCs	Parks SDCs	Outside 20 years	Developer Contributions	
Water Supply and Treatment								
1	Install VFD and backup power at well no. 3	\$372,000	\$372,000	\$0	\$0	\$0	\$0	\$372,000
11	Construct new well no. 5	2,102,000	-	2,102,000	-	-	-	2,102,000
2	Rebuild well no. 1 pump station bldg. and install new onsite CL2 generator	808,000	808,000	-	-	-	-	808,000
	Subtotal water supply and treatment	\$3,282,000	\$1,180,000	\$2,102,000	\$0	\$0	\$0	\$3,282,000
Water Storage								
3	Construct new 2.2 mg water storage tank & rehabilitate the existing 1.6 mg tank	\$6,283,000	\$331,000	\$5,952,000	\$0	\$0	\$0	\$6,283,000
Water Distribution								
4	Install new 16" PVC transmission line on Edgington road to City limits	\$3,635,000	\$0	\$3,635,000	\$0	\$0	\$0	\$3,635,000
5	Install new 16" DI transmission line from existing reservoir to Whychus Cr. Junction	1,466,000	689,020	776,980	-	-	-	1,466,000
6	Replace existing AC distribution mains in Edge-O-The-Pines subdivision	1,567,000	1,567,000	-	-	-	-	1,567,000
7	Install new 12" PVC water main on Camp Polk Road extension - E. Barclay to E. Sun Ranch dr.	319,000	-	319,000	-	-	-	319,000
8	Install new 12" DI transmission line Whychus Cr. Junction to East Tye dr.	2,504,000	2,504,000	-	-	-	-	2,504,000
9	Install new 12" PVC main from E. Desperado tr. To Creekside dr.	654,000	-	654,000	-	-	-	654,000
10	Reconnect existing Hood ave. S. Alley water services from w. Hood ave. or w. Washington ave.	103,000	103,000	-	-	-	-	103,000
	Ongoing water service meter replacement - 50 units per year at \$400 per unit:							
	2023 through 2027	100,000	100,000	-	-	-	-	100,000
	2028 through 2032	100,000	100,000	-	-	-	-	100,000
	2033 through 2042	200,000	200,000	-	-	-	-	200,000
	Subtotal water distribution	\$10,648,000	\$5,263,020	\$5,384,980	\$0	\$0	\$0	\$10,648,000
2023 Water Master Plan CIP total - \$		\$20,213,000	\$6,774,020	\$13,438,980	\$0	\$0	\$0	\$20,213,000
2023 Water Master Plan CIP total - %			34%	66%	0%	0%	0%	100%

Water Customers Current and Future Demographics

Existing Water Demand and Population Growth

Current Sisters water demands are based on historical customer billing records, and actual water meters in service as of November, 2023. Projected demands are estimated based on an approximate population growth rate of 3.23 percent per year within the City's existing urban growth boundary. This annual population growth factor is based on population forecasts for the City prepared by the Population Research Center at Portland State University.

Estimated Demand per Equivalent ¾" Water Meter

The City serves single-family residential customers and a smaller number of multifamily housing developments and commercial customers. Single-family residential water services generally have a consistent daily pattern of water use whereas water demands for multifamily residences, commercial and industrial users may vary significantly from service to service depending on the number of multifamily units per service or the type of commercial enterprise. When projecting future water demands based on population change, the water needs of nonresidential and multi-family residential customers are represented by comparing the water use volume at these services to the average single-family residential water service. A method to estimate this relationship is to calculate "equivalent dwelling units (EDUs)." In the case of Sisters, the standard residential unit of demand is the rated capacity (in gallons per minute) of the ¾" water meter. As of November, 2023, the City had 2,033 active water meters in service, 1,703 of which were ¾" meters serving single family residential customers. In other words, roughly 84% of all active water services were assigned to the single family residential customer class. The process for calculating equivalent ¾" meters is shown below in Table 4.

Table 4 – Estimated ¾" Equivalent Meters in Service as of November, 2023

Meter Size	Total Meters In Service	AWWA Rated Flow (GPM)*	Flow Factor Equivalence	5/8" Meter Equivalents
<i>Small/residential meters:</i>				
0.625" x 0.75" - Displacement or Multi-jet	-	30	1.00	-
0.75"x 0.75" - Displacement or Multi-jet	1,703	30	1.00	1,703
1.00 inch - Displacement or Multi-jet	237	50	1.67	395
1.50 inch - Displacement or Class I Turbine	38	100	3.33	127
2.00 inch - Displacement or Class I & II Turbine	45	160	5.33	240
<i>Large/commercial & industrial meters:</i>				
<i>3 inch meters:</i>				
Displacement	-	300	10.00	-
Compound	10	320	10.67	107
Class I & II turbine	-	350	11.67	-
<i>4 inch meters:</i>				
Displacement or Compound	-	500	16.67	-
Class I turbine	-	600	20.00	-
<i>6 inch meters:</i>				
Displacement or Compound	-	1000	33.33	-
Class I turbine	-	1250	41.67	-
<i>8 inch meters:</i>				
Compound	-	1600	53.33	-
Class I turbine	-	1800	60.00	-
<i>10 inch meters:</i>				
Compound	-	2300	76.67	-
Class I turbine	-	2900	96.67	-
Total	2,033			2,571

* - AWWA Manual of Practice M6; Water Meters - Selection, Installation, Testing, and Maintenance; Table 2-2 Total Quantities Registered per Month by Meters Operating at Varying Percentages of Maximum Capacity

Projected Demands

The planning horizon for the master plan is approximately 20 years, through the year 2042. That is the forecast horizon that is used for the water SDC update. In the 2023 master plan, an estimated number of EDUs per acre for each land use type was established based on (then) current water demands by customer class and total developed land area by land use type. Land use type is analogous to customer class, which is to say the land use or zoning of a particular property reflects the type of water service, such as residential or commercial, provided to that property. The estimated number of potential EDUs per acre was applied to developable land within the existing water service area to estimate water demand.

For this SDC update, the project team did not use the old master plan strategy to forecast future water demand based on land use. With the benefit of actual meters in service, and a population growth forecast that is predicated on existing growth trends for the City a forecast of future equivalent ¾" meters was

developed. Based upon these decision rules, the forecast of equivalent meters in use for this water SDC update are shown below in Table 5

Table 5 – Forecast of Equivalent ¾” Meters for the 2023 Water SDC Update Study

	2020	2023	2042	Growth	CAGR ¹
Service Population Forecast ²	3220	3,778	6,917	3,139	3.23%
Total number of 5/8" or 3/4" meter equivalents ³		2,571	4,708	2,137	3.23%

¹ Compound Annual Growth Rate

² Source: Wastewater Facilities Plan Update 2023; Anderson Perry & Associates; Chart 1-2; 2023 population adjusted for latest estimate from PSU dated December 1, 2023

³ Source: City of Sisters Water utility billing system records

Reimbursement Fee Calculations

As discussed earlier in this report, the reimbursement fee represents a buy-in to the cost, or value, of infrastructure capacity within the existing system. In theory, this should be a simple calculation. Simply go to the Utility’s balance sheet, find the book value of assets in service, and divide that cost by the number of forecasted new connections to the water system. That is a simple calculation, and it is wrong. In order to determine an equitable reimbursement, we have to account for some key issues of rate equity;

- First, the cost of the system to the City’s existing customers may be far less than the total plant-in-service value. This is due to the fact that elements of the existing system may have been contributed, whether from developers, governmental grants, and other sources.
- Second, the value of the existing system to a new customer is less than the value to an existing customer, since the new customer must also pay, through an improvement fee, for expansion of some portions of the system.
- Third, the accounting treatment of asset costs generally has no relationship to the capacity of an asset to serve growth. In the absence of a detailed asset by asset analysis detailed in the balance sheet (or fixed asset schedule), a method has to be used to allocate cost to existing and future users of the asset. Generally, it is industry practice to allocate the cost of existing facilities between used and available capacity proportionally based on the forecasted population growth as converted to equivalent dwelling units (i.e., equivalent ¾” meters) over the planning period.
- Fourth, the Oregon SDC statute has strict limitations on what type of assets can be included in the basis of the reimbursement fee. ORS 223.299 specifically states that a “capital improvement” does not include costs of the operation or routine maintenance of capital improvements. This means the assets on the balance sheet such as certain vehicles and equipment used for heavy repair and maintenance of infrastructure cannot be included in the basis of the reimbursement fee.

For this water SDC update, the following discrete calculation steps were followed to arrive at the recommended water reimbursement fee.

- Step 1: Calculate the original cost of water fixed assets in service. From this starting point, eliminate any assets that do not conform to the ORS 223.299 definition of a capital improvement. This results in the **adjusted original cost of water fixed assets**.
- Step 2: Subtract from the adjusted original cost of water fixed assets in service the accumulated depreciation of those fixed assets. This arrives at the **modified book value of water fixed assets in service**.
- Step 3: Subtract from the modified book value of water assets in service any grant funding or contributed capital. This arrives at the **modified book value of water fixed assets in service net of grants and contributed capital**.
- Step 4: Subtract from the modified book value of water fixed assets in service net of grants and contributed capital any principal outstanding on long term debt used to finance those assets. This arrives a **gross water reimbursement fee basis**.
- Step 5: Subtract from the gross water reimbursement fee basis the fund balance held in the Water Reimbursement SDC fund (if available). This arrives at the **net water reimbursement fee basis**.
- Step 6: Divide the net water reimbursement fee basis by the sum of existing and future EDUs to arrive at the **unit net reimbursement fee**.

The actual data that was used to calculate the total water reimbursement fee is shown below in Table 6.

Table 6 - Calculation of the Water Reimbursement Fee

Utility Plant-in-Service (original cost): ¹	
Land	\$ 10,022
Intangible plant - water rights	268,688
Office equipment ²	eliminated
Buildings	625,272
Tools & equipment ²	eliminated
Water system	11,793,584
Construction Work-in-Progress	<u>59,335</u>
Total Utility Plant-in-Service	\$ 12,756,900
Accumulated depreciation ¹	
Land	-
Intangible plant - water rights	-
Office equipment ²	eliminated
Buildings	203,362
Tools & equipment ²	eliminated
Water system	3,674,187
Construction Work-in-Progress	<u>-</u>
Total accumulated depreciation	3,877,549
Book value of water utility plant-in-service @ June 30, 2023	8,879,351
Eliminating entries:	
Principal outstanding on bonds, notes, and loans payable ³	-
Developer Contributions	-
Grants, net of amortization	<u>-</u>
	-
Net basis in utility plant-in-service available to serve future customers	\$ 8,879,351
Estimated existing and future Water treatment EDUs	4,708
Calculated reimbursement fee - \$ per treatment EDU	<u>\$ 1,886</u>

¹ Source: City of Sisters Report #36-42 Fixed Assets as of June 30, 2023

² ORS 223.299 specifically states that a “capital improvement” does not include costs of the operation or routine maintenance of capital improvements. This means the assets on the balance sheet such as certain vehicles and equipment used for heavy repair and maintenance of infrastructure cannot be included in the basis of the reimbursement fee.

³ Source: City of Sisters Audit Report for the fiscal year ended June 30, 2022; Note G - Long Term Debt; page 31

Improvement Fee Calculations

The calculation of the water improvement fee is more streamlined than the process used to calculate the water reimbursement fee. This study continues to use the improvements-driven method and has relied on the 2023 water system capital improvement plan. Under this approach, only three steps are required to arrive at the improvement fee. These steps are:

- Step 1: Accumulate the future cost of planned improvements needed to serve growth. This arrives at **the gross improvement fee basis**.
- Step 2: Subtract from the gross improvement fee basis the fund balance held in the Water Improvement SDC Fund. This arrives at **the net water improvement fee basis**.
- Step 3: Divide the net water improvement fee basis by the forecasted number of growth equivalent $\frac{3}{4}$ " meters over the planning period. This arrives at **the total water improvement fee**.

The actual data that was used to calculate the total water improvement fee is shown below in Table 7.

Table 7 - Calculation of the Water Improvement Fee

Line Item Description	Total Cost	Projected Funding Sources						Total
		Water Rates	Water SDCs	Parks SDCs	Outside 20 years	Developer Contributions		
<i>Water Supply and Treatment</i>								
Install VFD and backup power at well no. 3	\$372,000	\$372,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$372,000
Construct new well no. 5	2,102,000	-	2,102,000	-	-	-	-	2,102,000
Rebuild well no. 1 pump station bldg. and install new onsite CL2 generator	808,000	808,000	-	-	-	-	-	808,000
<i>Water Storage</i>								
Construct new 2.2 mg water storage tank & rehabilitate the existing 1.6 mg tank	\$ 6,283,000	\$ 331,000	\$ 5,952,000	\$ -	\$ -	\$ -	\$ -	\$ 6,283,000
<i>Water Distribution</i>								
Install new 16" PVC transmission line on Edgington road to City limits	\$ 3,635,000	\$ -	\$ 3,635,000	\$ -	\$ -	\$ -	\$ -	\$ 3,635,000
Install new 16" DI transmission line from existing reservoir to Whychus Cr. Junction	1,466,000	689,020	776,980	-	-	-	-	1,466,000
Replace existing AC distribution mains in Edge-O-The-Pines subdivision	1,567,000	1,567,000	-	-	-	-	-	1,567,000
Install new 12" PVC water main on Camp Polk Road extension - E. Barclay to E. Sun Ranch dr.	319,000	-	319,000	-	-	-	-	319,000
Install new 12" DI transmission line Whychus Cr. Junction to East Tyee dr.	2,504,000	2,504,000	-	-	-	-	-	2,504,000
Install new 12" PVC main from E. Desperado tr. To Creekside dr.	654,000	-	654,000	-	-	-	-	654,000
Reconnect existing Hood ave. S. Alley water services from w. Hood ave. or w. Washington ave.	103,000	103,000	-	-	-	-	-	103,000
Ongoing water service meter replacement - 50 units per year at \$400 per unit:								
2023 through 2027	100,000	100,000	-	-	-	-	-	100,000
2028 through 2032	100,000	100,000	-	-	-	-	-	100,000
2033 through 2042	200,000	200,000	-	-	-	-	-	200,000
Capital Improvement Plan Total - \$	\$ 20,213,000	\$ 6,774,020	\$ 13,438,980	\$ -	\$ -	\$ -	\$ -	\$ 20,213,000
Capital Improvement Plan Total - %	100%	34%	66%	0%	0%	0%	0%	100%
Total Improvement Fee Eligible Costs for Future System Improvements			\$ 13,438,980					
less: Water improvement SDC Fund balance as of June 30, 2023			<u>2,757,361</u>					
Adjusted Improvement Fee Eligible Costs for Future System Improvements			\$ 10,681,619					
Total Growth in 3/4" Meter Equivalents (20 year forecast)			2,137					
Calculated Water Improvement Fee SDC per Meter Equivalent			<u>\$ 4,999</u>					

Water SDC Model Summary

The 2023 water SDC update was done in accordance with Sisters Municipal Code Chapter 13.25, and with the benefit of adopted plan updates for water services. We recommend the City update the SDC charge to reflect the current capital improvement program. A comparison of the proposed and current water SDCs for the average single family residential customer is shown below in Table 8.

Table 8 - Proposed and Current Water SDCs for a 3/4" Meter

Water SDC Components	Proposed	Current	Difference
Reimbursement fee	1,886	1,845	41
Improvement fee	4,999	1,918	3,082
Compliance fee at 5%	344	188	156
Total water SDC	\$ 7,229	\$ 3,951	\$ 3,278

For water meters larger than 3/4," the project team has developed a schedule of SDCs based on the general design criteria for meters that are installed in the Sisters water service area. This criteria is from the standard approach of using American Water Works Association design criteria for displacement and compound water meters.

The resulting schedule of water SDCs for the array of potential meter sizes is shown below in Table 9.

Table 9 - Proposed Schedule of Water SDCs by Potential Water Meter Size

Meter Size	AWWA Rated Flow (GPM)*	Flow Factor Equivalence	Proposed Schedule of Water SDCs			
			Reimbursement	Improvement	Compliance	Total
<i>Small/residential meters:</i>						
0.625" x 0.75" - Displacement or Multi-jet	30	1.00	\$ 1,886	\$ 4,999	\$ 344	\$ 7,229
0.75" x 0.75" - Displacement or Multi-jet	30	1.00	1,886	4,999	344	7,229
1.00 inch - Displacement or Multi-jet	50	1.67	3,143	8,332	573	12,049
1.50 inch - Displacement or Class I Turbine	100	3.33	6,287	16,664	1,147	24,097
2.00 inch - Compound Displacement or Class I & II Turbine	160	5.33	10,059	26,662	1,835	38,556
<i>Large/commercial & industrial meters:</i>						
<i>3 inch meters:</i>						
compound	320	10.67	20,117	53,325	3,669	77,112
<i>4 inch meters:</i>						
Displacement or Compound	500	16.67	31,434	83,320	5,733	120,487
<i>6 inch meters:</i>						
Displacement or Compound	1000	33.33	62,867	166,640	11,467	240,974
<i>8 inch meters:</i>						
Compound	1600	53.33	100,587	266,624	18,347	385,558
<i>10 inch meters:</i>						
Compound	2300	76.67	144,594	383,272	26,373	554,240

* - AWWA Manual of Practice M6; Water Meters - Selection, Installation, Testing, and Maintenance; Table 2-2 Total Quantities Registered per Month by Meters Operating at Varying Percentages of Maximum Capacity

Wastewater SDCs

Wastewater Capital Improvement Plan

The principal source document for the wastewater capital improvement plan (CIP) is the 2023 Wastewater Facilities Plan Update. For this water SDC update, the 2023 wastewater CIP was reviewed for accuracy with City Staff and where appropriate amended. As in the case of water, this amendment process consisted of two steps. The first step was to eliminate master plan projects that City Staff deemed unnecessary at the current time due to the very long lead times anticipated for their development. The second step in the CIP amendment process was to review the SDC-eligibility of each project in the CIP as incorporated in the 2023 Wastewater Facilities Plan Update (i.e., Table 6-2 Capital Improvements Breakdown by Revenue Stream). Each project and the Facilities Plan-recommended SDC eligibility was reviewed with City Staff for accuracy. Upon completion of this review, the following project's SDC eligibility was amended as follows:

- *Wastewater Collection System Improvements Westside Lift Station Improvements (\$2,165,000)* – In the 2023 wastewater facilities plan this project was deemed to be one hundred percent SDC eligible because the purpose of the project is to serve future growth in the westside basin. Upon further review, a literature search found the City's adopted 2022 Urban Renewal Plan identified this project to be 25% eligible for urban renewal funding. Therefore, the funding allocations for this project were revised accordingly, making it 75% SDC-eligible.

The resulting CIP that was used for this SDC update is shown in summary form in Table 10

Table 10 - 2023 Wastewater System CIP

Project Description	Total Project Cost	Projected Funding Sources						Total
		Rates	Sewer SDCs	Parks SDCs	Urban Renewal	Outside 20 years	Developer Contributions	
<i>Wastewater Collection System Improvements</i>								
1 Rope street lift station improvements	\$624,000	\$624,000	\$0	\$0	\$0	\$0	\$0	\$624,000
2 Westside lift station improvements	2,165,000	-	1,623,750	-	541,250	-	-	2,165,000
3 Creekside court lift station improvements	<u>1,159,000</u>	<u>1,159,000</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>1,159,000</u>
Subtotal WW collection system improvements	\$3,948,000	\$1,783,000	\$1,623,750	\$0	\$541,250	\$0	\$0	\$3,948,000
<i>Wastewater Treatment System Improvements</i>								
4 Biosolids removal	\$200,000	\$200,000	\$0	\$0	\$0	\$0	\$0	\$200,000
5 Lagoons No. 2 and 3 aerator replacement	443,000	221,500	221,500	-	-	-	-	443,000
6 Chlorine contact system improvements	97,000	97,000	-	-	-	-	-	97,000
7 Headworks improvement	<u>471,000</u>	<u>471,000</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>471,000</u>
Subtotal WW treatment system improvement	\$1,211,000	\$989,500	\$221,500	\$0	\$0	\$0	\$0	\$1,211,000
<i>Treated Wastewater Disposal System Improvements</i>								
8 Lazy Z Ranch phase 1	\$5,130,000	\$0	\$4,617,000	\$513,000	\$0	\$0	\$0	\$5,130,000
9 Lazy Z Ranch phase 2	<u>620,000</u>	<u>-</u>	<u>620,000</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>620,000</u>
Subtotal WW disposal system improvements	\$5,750,000	\$0	\$5,237,000	\$513,000	\$0	\$0	\$0	\$5,750,000
2023 WW Master Plan CIP total - \$	\$10,909,000	\$2,772,500	\$7,082,250	\$513,000	\$541,250	\$0	\$0	\$10,909,000
2023 WW Master Plan CIP total - %		25%	65%	5%	5%	0%	0%	100%

Wastewater Customers Current and Future Demographics

Existing Wastewater Demand and Population Growth

There are two recognized approaches for measuring wastewater demand. The first is based on actual connections to the sewer system and the second is based on observed Average Annual Dry Weather Flows (AADWF) to the headworks of the wastewater treatment plant. The AADWF method is used when actual connections data is not available.

As we showed in the water analysis, the City has accurate billing records for known sewer customer counts and connections by meter size. Using the same process for calculating water MEs, we know that as of November 17, 2023, the City had 1,956 active wastewater Equivalent Dwelling Units (EDUs) in the utility billing system. The process for calculating future wastewater EDUs is shown below in Table 11.

Table 11 - Forecast of Current and Future Wastewater EDUs based on Actual Connections

	2020	2023	2023 through 2042		
			2042	Growth	CAGR ¹
Estimated population ²	3,220	3,778	6,917	3,139	3.23%
Estimated Equivalent Dwelling Units (EDUs) ³		1,956	3,581	1,625	3.23%

¹ CAGR - Compounded Annual Growth Rate

² Source: Wastewater Facilities Plan Update 2023; Anderson Perry & Associates; Chart 1-2; 2023 population adjusted for latest PSU estimate as of December 1, 2023

³ Source: City of Sisters Utility Billing System as of November 17, 2023

Reimbursement Fee Calculations

The wastewater reimbursement fee calculation mirrors that used for the water reimbursement fee. The methodological steps in its construction are restated here.

- Step 1: Calculate the original cost of wastewater fixed assets in service. From this starting point, eliminate any assets that do not conform to the ORS 223.299 definition of a capital improvement. This results in the **adjusted original cost of wastewater fixed assets**.
- Step 2: Subtract from the adjusted original cost of wastewater fixed assets in service the accumulated depreciation of those fixed assets. This arrives at the **modified book value of wastewater fixed assets in service**.
- Step 3: Subtract from the modified book value of wastewater assets in service any grant funding or contributed capital. This arrives at the **modified book value of wastewater fixed assets in service net of grants and contributed capital**.
- Step 4: Subtract from the modified book value of wastewater fixed assets in service net of grants and contributed capital any principal outstanding on long term debt used to finance those assets. This arrives a **gross wastewater reimbursement fee basis**.
- Step 5: Subtract from the gross wastewater reimbursement fee basis the fund balance held in the Wastewater Reimbursement SDC fund (if available). This arrives at the **net wastewater reimbursement fee basis**.
- Step 6: Divide the net wastewater reimbursement fee basis by the sum of existing and future EDUs to arrive at the **unit net reimbursement fee**.

The actual data that was used to calculate the total wastewater reimbursement fee is shown below in Table 12.

Table 12 - Calculation of the Wastewater Reimbursement Fee

Utility Plant-in-Service (original cost): ¹	
Land	\$ 4,279,683
Artwork ²	eliminated
Buildings	13,227
Tools & equipment ²	eliminated
Sewer system	16,521,031
Construction Work-in-Progress	632,370
Total Utility Plant-in-Service	<u>\$ 21,446,311</u>
Accumulated depreciation ¹	
Land	-
Artwork ²	eliminated
Buildings	11,904
Tools & equipment ²	eliminated
Sewer system	5,644,502
Construction Work-in-Progress	-
Total accumulated depreciation	<u>5,656,406</u>
Book value of water utility plant-in-service @ June 30, 2023	15,789,905
Eliminating entries:	
Principal outstanding on bonds, notes, and loans payable: ³	
2016 full faith and credit sewer refunding bonds - Series A	407,000
2016 full faith and credit sewer refunding bonds - Series B	3,790,000
Amortization of bond premium	379,629
Developer Contributions	-
Grants, net of amortization	-
	<u>4,576,629</u>
Net basis in utility plant-in-service available to serve future customers	\$ 11,213,276
Estimated existing and future wastewater treatment EDUs	3,581
Calculated reimbursement fee - \$ per treatment EDU	<u><u>\$ 3,131</u></u>

¹ Source: City of Sisters Report #36-42 Fixed Assets as of June 30, 2023

² ORS 223.299 specifically states that a “capital improvement” does not include costs of the operation or routine maintenance of capital improvements. This means the assets on the balance sheet such as certain vehicles and equipment used for heavy repair and maintenance of infrastructure cannot be included in the basis of the reimbursement fee.

³ Source: City of Sisters Audit Report for the fiscal year ended June 30, 2022; Note G - Long Term Debt; page 31

Improvement Fee Calculations

The calculation of the wastewater improvement fee also follows the logic that was used to calculate the water improvement fee. As in the case of water, this study continues to use the improvements-driven method, and has relied on the capital improvement plans, and plan updates for the wastewater treatment, pump stations, and collection systems. Under this approach, only three steps are required to arrive at the improvement fee. These steps are:

- Step 1: Accumulate the future cost of planned improvements needed to serve growth. This arrives at **the gross improvement fee basis**.
- Step 2: Subtract from the gross improvement fee basis the fund balance held in the Wastewater Improvement SDC Fund. This arrives at **the net wastewater improvement fee basis**.
- Step 3: Divide the net wastewater improvement fee basis by the forecasted number of growth EDUs over the planning period. This arrives at **the total wastewater improvement fee**.

The actual data that was used to calculate the total wastewater improvement fee is shown below in Table 13.

Table 13 - Calculation of the Wastewater Improvement Fee

Project Description	Total Project Cost	Projected Funding Sources						Total
		Sewer Rates	Sewer SDCs	Parks SDCs	Urban Renewal	Outside 20 years	Developer Contribution	
<i>Wastewater Collection System Improvements</i>								
Rope street lift station improvements	\$624,000	\$624,000	\$0	\$0	\$0	\$0	\$0	\$624,000
Westside lift station improvements	2,165,000	-	1,623,750	-	541,250	-	-	2,165,000
Creekside court lift station improvements	1,159,000	1,159,000	-	-	-	-	-	1,159,000
<i>Wastewater Treatment System Improvements</i>								
Biosolids removal	200,000	200,000	-	-	-	-	-	200,000
Lagoons No. 2 and 3 aerator replacement	443,000	221,500	221,500	-	-	-	-	443,000
Chlorine contact system improvements	97,000	97,000	-	-	-	-	-	97,000
Headworks improvement	471,000	471,000	-	-	-	-	-	471,000
<i>Treated Wastewater Disposal System Improvements</i>								
Lazy Z Ranch phase 1	5,130,000	-	4,617,000	513,000	-	-	-	5,130,000
Lazy Z Ranch phase 2	620,000	-	620,000	-	-	-	-	620,000
Capital Improvement Plan Total - \$	\$10,909,000	\$2,772,500	\$7,082,250	\$513,000	\$541,250	\$0	\$0	\$10,909,000
Capital Improvement Plan Total - %		25%	65%	5%	5%	0%	0%	100%
Total Improvement Fee Eligible Costs for Future System Improvements			\$7,082,250					
less: Wastewater SDC Fund balance as of June 30, 2023			3,701,442					
Adjusted Improvement Fee Eligible Costs for Future System Improvements			\$3,380,808					
Total Growth in sewer EDUs (20 year forecast)			1,625					
Calculated Sewer Improvement Fee SDC per EDU			\$ 2,080					

Wastewater SDC Model Summary

The 2023 wastewater SDC update was done in accordance with Sisters Municipal Code Chapter 13.25, and with the benefit of adopted capital improvement plans and plan updates for wastewater services. We recommend the City update the SDC charge to reflect the current capital improvement program. A comparison of the proposed and current wastewater SDCs for the average single family residential customer is shown below in Table 14.

Table 14 - Proposed and Current Wastewater SDCs for a 3/4" Meter

Wastewater SDC Components	Proposed	Current	Difference
Reimbursement fee	3,131	2,816	316
Improvement fee	2,080	2,104	(24)
Compliance fee at 5%	<u>261</u>	<u>246</u>	<u>15</u>
Total water SDC	\$ 5,472	\$ 5,166	\$ 306

For water meters larger than ¾," the schedule of wastewater SDC uses the same flow factors that were developed for the water SDCs (i.e., AWWA standards for displacement and compound meters). The complete proposed schedule of wastewater SDCs by potential meter size are shown in Table 15.

Table 15 - Proposed Schedule of Wastewater SDCs by Potential Water Meter Size

Meter Size	AWWA Rated Flow (GPM)*	Flow Factor Equivalence	Proposed Schedule of Wastewater SDCs			
			Reimbursement	Improvement	Compliance	Total
<i>Small/residential meters:</i>						
0.625" x 0.75" - Displacement or Multi-jet	30	1.00	\$ 3,131	\$ 2,080	\$ 261	\$ 5,472
0.75" x 0.75" - Displacement or Multi-jet	30	1.00	3,131	2,080	261	5,472
1.00 inch - Displacement or Multi-jet	50	1.67	5,219	3,467	435	9,121
1.50 inch - Displacement or Class I Turbine	100	3.33	10,437	6,934	870	18,242
2.00 inch - Compound Displacement or Class I & II Turbine	160	5.33	16,700	11,095	1,392	29,186
<i>Large/commercial & industrial meters:</i>						
<i>3 inch meters:</i>						
compound	320	10.67	33,399	22,190	2,784	58,373
<i>4 inch meters:</i>						
Displacement or Compound	500	16.67	52,186	34,671	4,350	91,208
<i>6 inch meters:</i>						
Displacement or Compound	1000	33.33	104,373	69,343	8,700	182,415
<i>8 inch meters:</i>						
Compound	1600	53.33	166,996	110,948	13,920	291,865
<i>10 inch meters:</i>						
Compound	2300	76.67	240,057	159,488	20,010	419,555

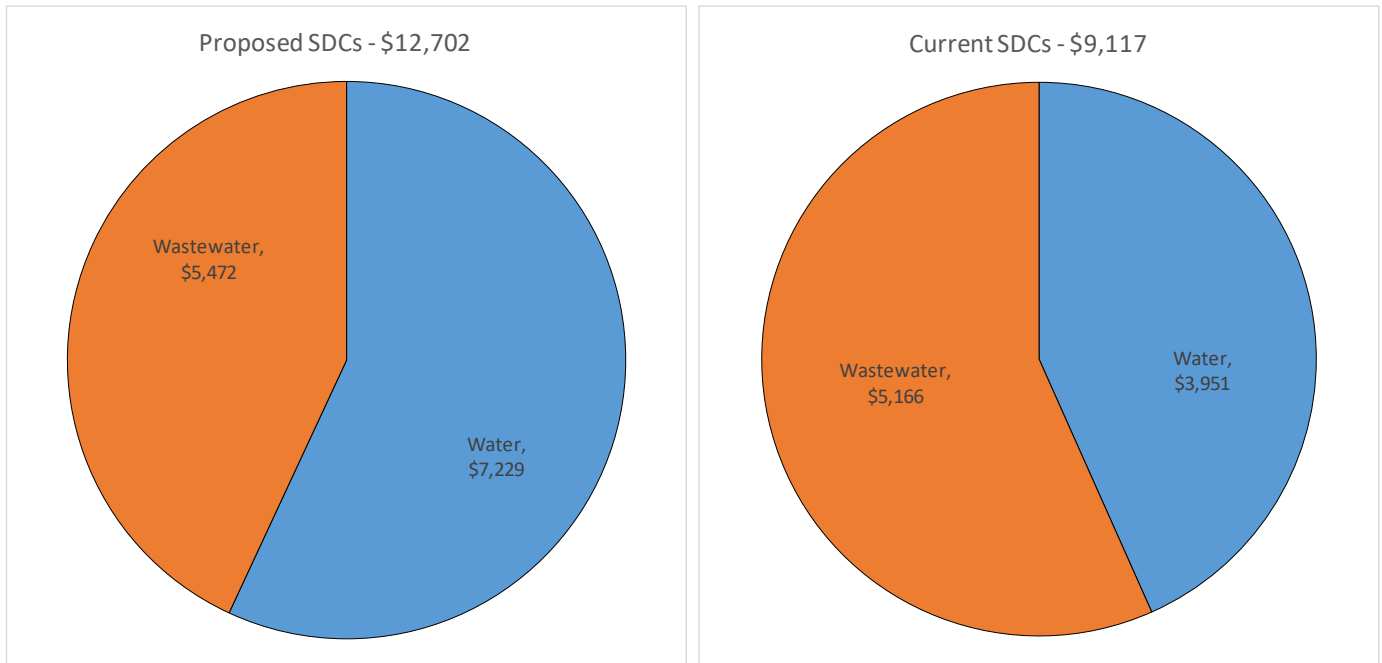
* - AWWA Manual of Practice M6; Water Meters - Selection, Installation, Testing, and Maintenance; Table 2-2 Total Quantities Registered per Month by Meters Operating at Varying Percentages of Maximum Capacity

Conclusions and Recommendations

Our analysis indicates the City can charge a maximum of \$7,229 for water, \$5,472 for wastewater. These figures are on a per equivalent single family residential unit basis. The sum of these maximum fees amounts to \$12,702 per unit; \$3,585 more than the sum of the current SDCs of \$9,117.

A graphic side by side comparison of the proposed and current schedule of SDCs is shown below in figure 2.

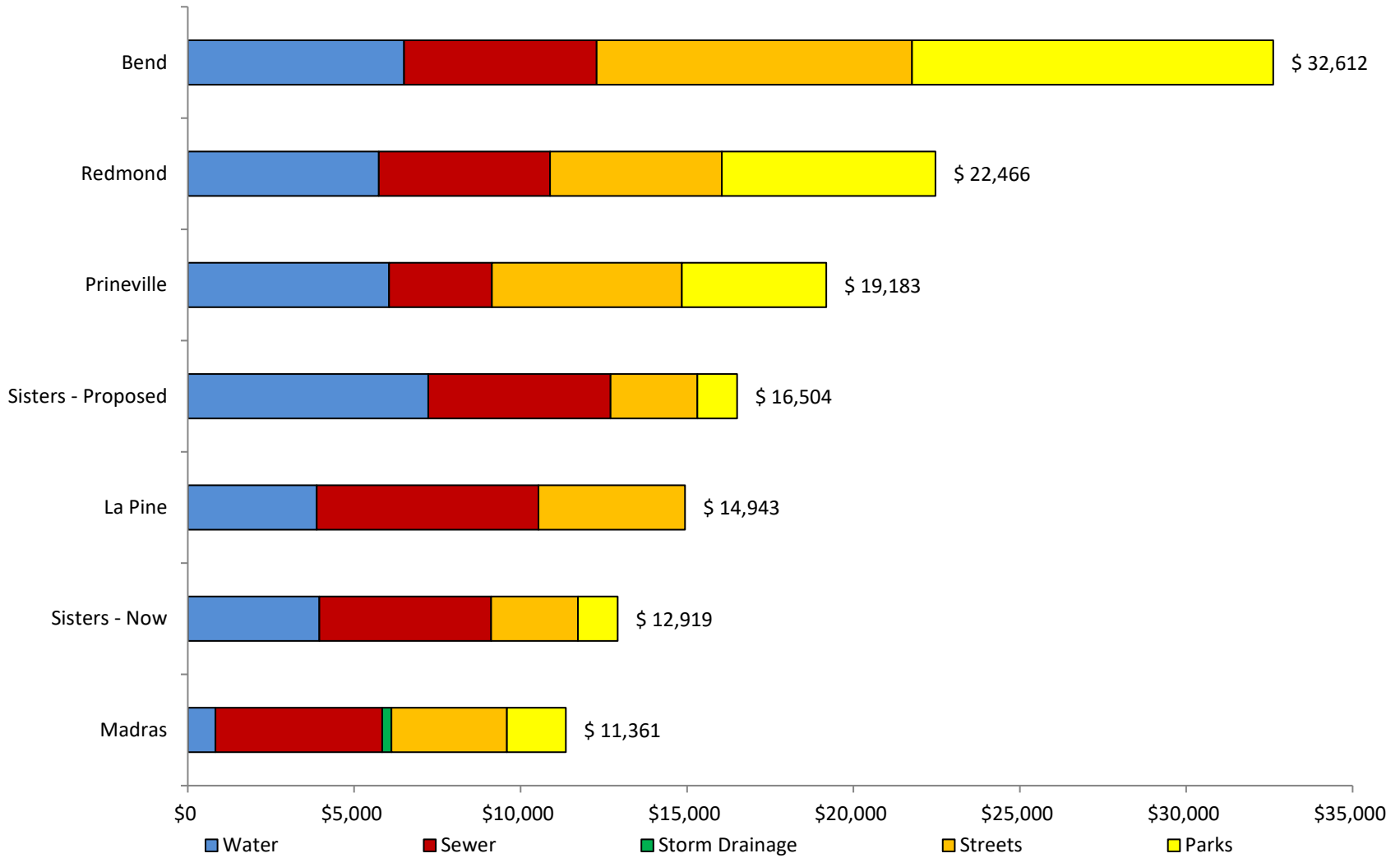
Figure 2 - Proposed and Current Schedule of SDCs



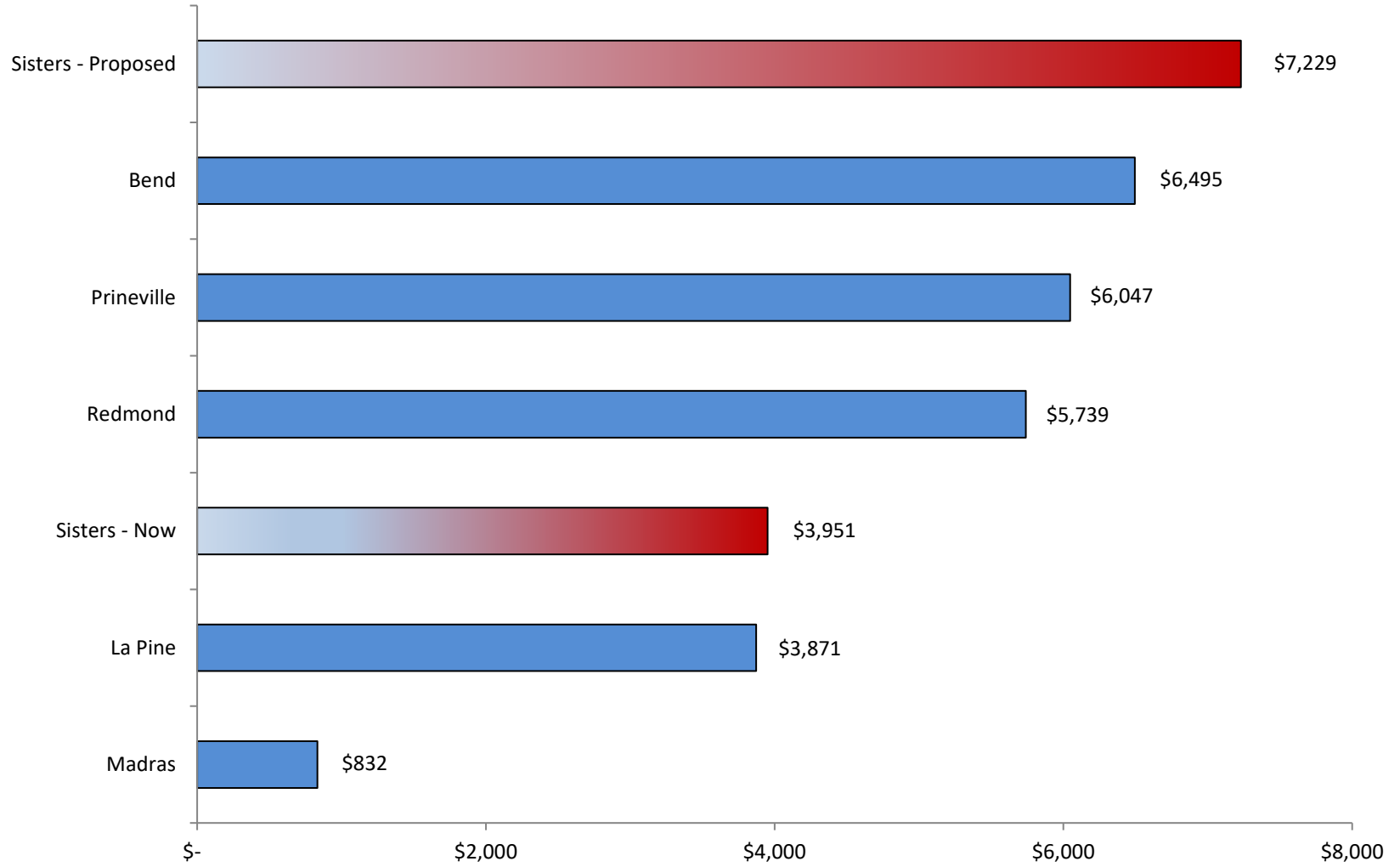
Finally, we recommend the City adopt a policy of reviewing its suite of SDCs every five years. Between the review dates, the city should apply a cost adjustment index to the SDC rates annually to reflect changes in costs for land and construction. This policy has been codified in the Sisters Municipal Code via Resolution 2018-04.

Neighboring Communities' SDCs

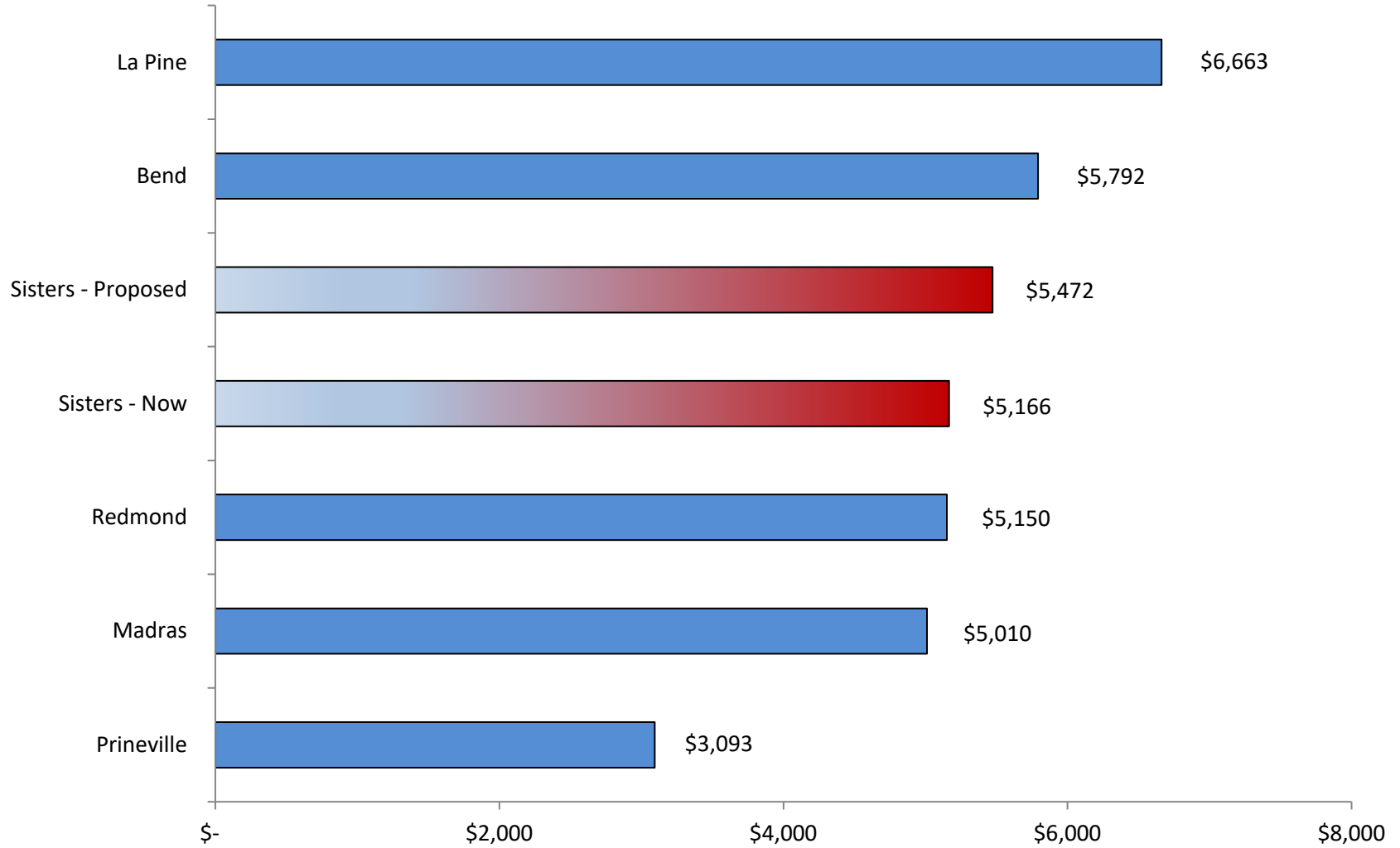
Figure 3 - Comparison of Neighboring Communities' SDCs (Single Family Residential) as of December, 2023



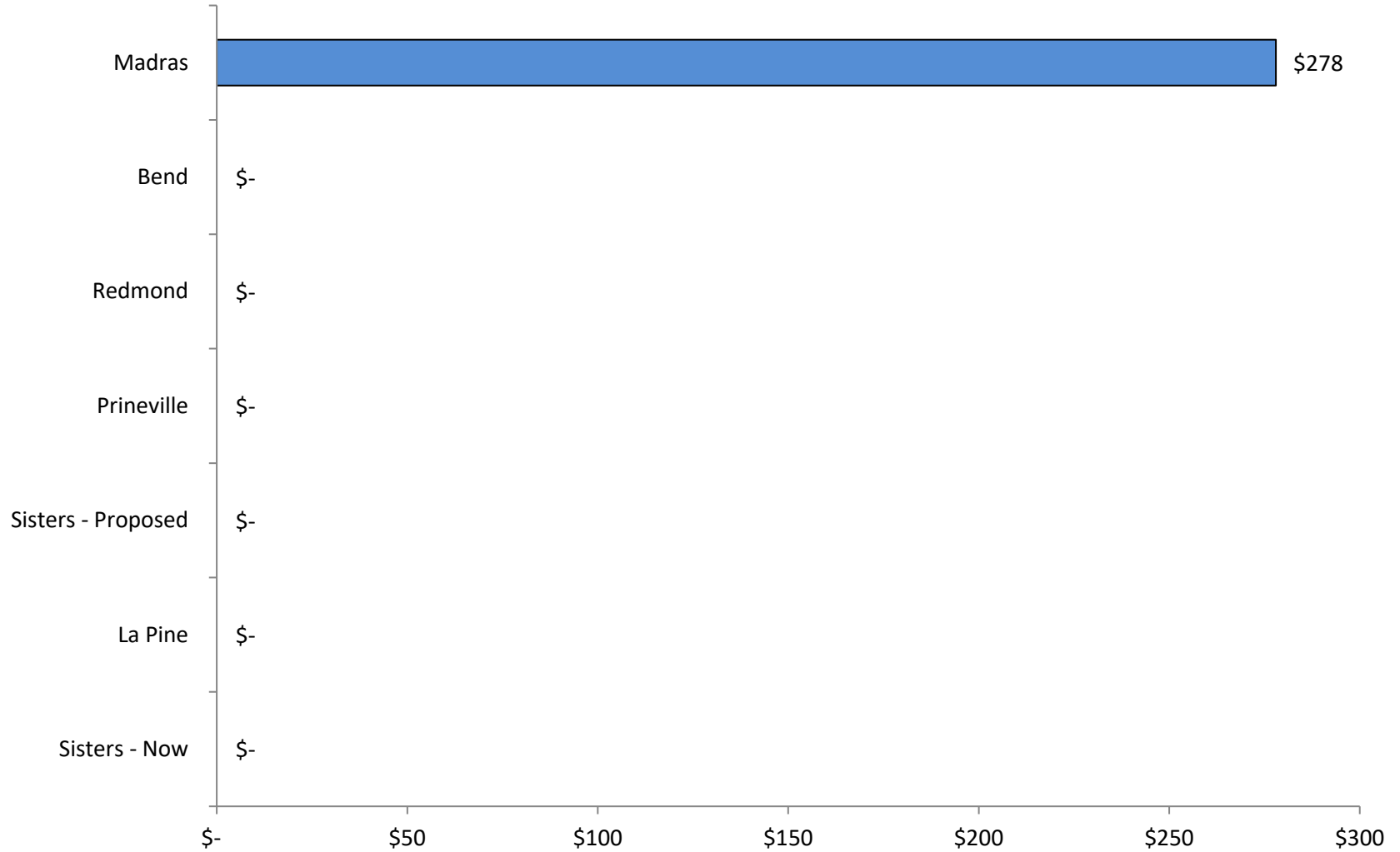
Neighboring Communities' System Development Charges - Water SFR December, 2023



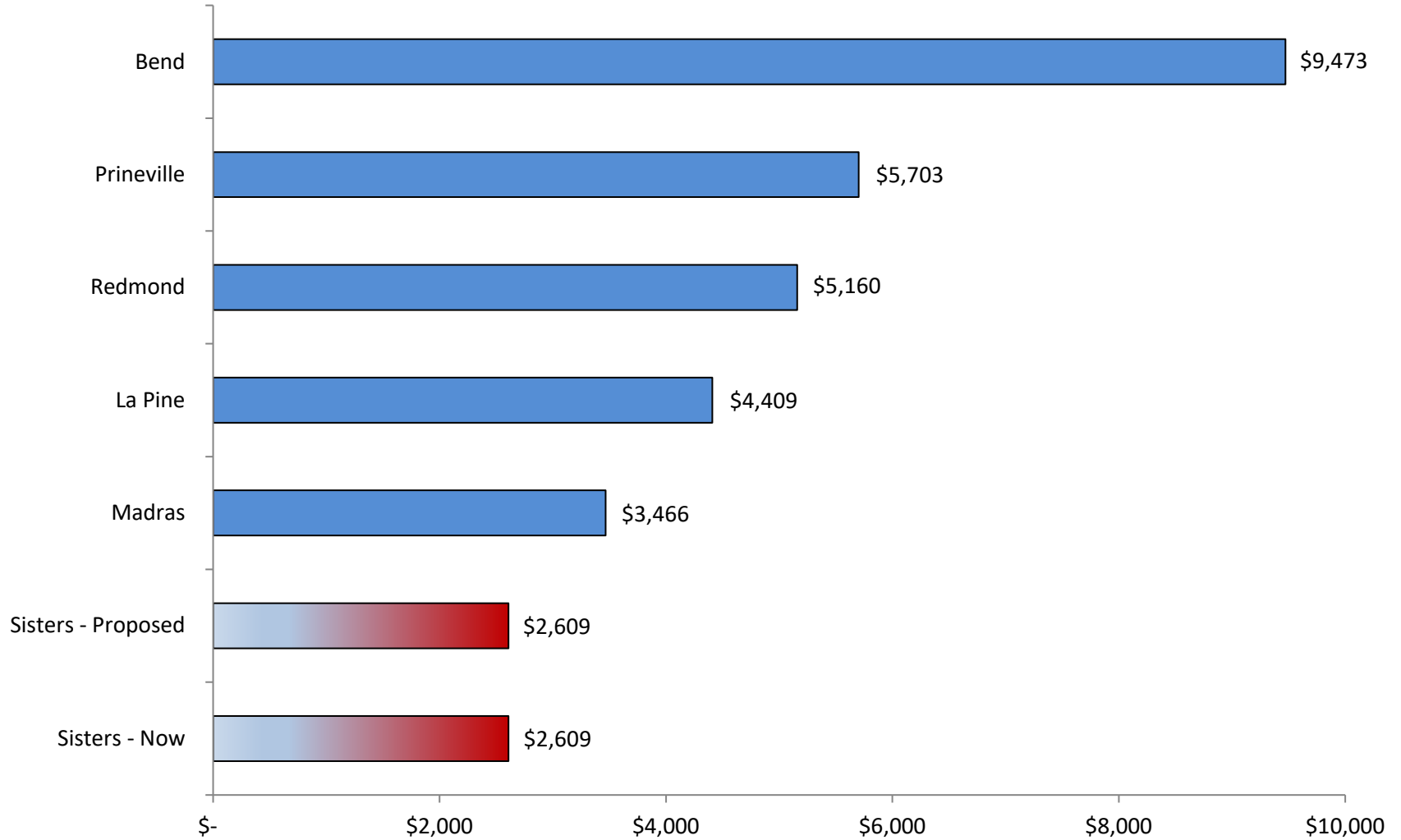
Neighboring Communities' System Development Charges - Wastewater SFR December, 2023



Neighboring Communities' System Development Charges - Stormwater SFR December, 2023



Neighboring Communities' System Development Charges - Transportation SFR December, 2023



Neighboring Communities' System Development Charges - Parks SFR December, 2023

